COPPER PRICE AND THE CHILEAN ECONOMY

José De Gregorio
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March 26, 2007
Agenda

• Copper in the Chilean Economy
• Copper boom and its impact on the economy
• The role of macroeconomic policies
• Concluding remarks
Copper in the Chilean Economy

- The Chilean copper production represents 36% of world production
- It represents approximately 8% of Chilean GDP
- Mining employs approximately 1% of total employment
Copper in the Chilean Economy

Mining as a Share of GDP

<table>
<thead>
<tr>
<th>Decade</th>
<th>%</th>
</tr>
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<tbody>
<tr>
<td>1960's</td>
<td>7.0</td>
</tr>
<tr>
<td>1970's</td>
<td>6.7</td>
</tr>
<tr>
<td>1980's</td>
<td>7.7</td>
</tr>
<tr>
<td>1990's</td>
<td>6.9</td>
</tr>
<tr>
<td>2000's</td>
<td>7.9</td>
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</tbody>
</table>

Source: Central Bank of Chile
Copper in the Chilean Economy

Copper Exports
(% of total exports)

Source: Central Bank of Chile
Copper in the Chilean Economy

- During the last 30 years the effective foreign investment in mining has reached 33% of the total.
  - Chilean public policies have resulted on stability for the copper sector
  - Base law of Mining Concessions (1982) and Mining Code (1983) have stipulated clear property rights on mining concessions
Copper in the Chilean Economy

- Private mining has showed an increasing share of copper production, reaching approximately 70% of total.
- Copper tax revenues had diminished as a share of fiscal revenues. However, the current high copper price has resulted in transitory large fiscal revenues.
Copper in the Chilean Economy

Public and Private Copper Production
(% of total production)

Source: Cochilco
Copper in the Chilean Economy

Copper Taxes and Fiscal Revenues
(% of total fiscal revenues)

Source: Central Bank of Chile, Dipres
Copper in the Chilean Economy

Copper Taxes and Fiscal Revenues
(% of total fiscal revenues)

Source: Central Bank of Chile, Dipres

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Copper in the Chilean Economy

Mining Investment and the Copper Price

- Mining investment (public and DL600, left)
- Copper price (right)

Source: Central Bank of Chile, Cochilco
Copper boom and its impact on the economy

Copper Price
(US$/lb; US$ 2005)
Copper boom and its impact on the economy

GDP Growth and Copper Price

Annual change, %

US$2005/lb

GDP growth (left)   Copper price (right)
Copper boom and its impact on the economy

Terms of Trade and the Copper Price

Source: Central Bank of Chile, Cochilco
Copper boom and its impact on the economy

Why does the Chilean economy response to the copper prices seem to be much smaller than in the past?

- External financial reasons. *Sudden stops* or collateral effects.
- Macroeconomic policies
  - Fiscal role in Latin America
  - In Chile, monetary and exchange rate policies have played a crucial role
Copper boom and its impact on the economy

In the current boom, the most powerful explanation for the reduced response is the role of macroeconomic policies in stabilizing the cycle. As compared to other cycles, during the copper price boom of the mid nineties, fiscal balance was close to the one percent structural balance, and hence, the main difference with most recent episodes is exchange rate management and monetary policy.
Copper boom and its impact on the economy

Fiscal Balance and the Copper Price

- Structural balance (left)
- Global balance (left)
- Copper price (right)
Copper boom and its impact on the economy

Current Account and the Copper Price

% GDP

US$2005/lb


p: Preliminary
The role of macroeconomic policies

The copper boom and the current stabilizing effects of policies:

*Fiscal*
- Structural balance rule

*Monetary and Exchange rate*
- Credible inflation targeting
- Flexible exchange rate
The role of macroeconomic policies

Real Exchange Rate and the Copper Price

1986 = 100

US$2005/lb

RER (index, left)  Copper price (right)
The role of macroeconomic policies

Other explanations

- In this cycle the terms of trade improvement is mostly explained by copper.
- As part of national income its importance has diminished.
- Volatility of GDP has diminished all around the world.
Copper *boom* and its impact on the economy

Terms of Trade

2002 = 100

- **Total**
- **Copper excluded**
The role of macroeconomic policies

Volatility of GDP, Expansions

Difference with average (%)

Australia, Brazil, Canada, Chile, Colombia, Finland, Hungary, Iceland, N. Zealand, Philippines, Poland, South Africa, Thailand, Korea, Peru, Latin America, World, Advanced Ec., Europe

The role of macroeconomic policies

Volatility of GDP, Contractions

Difference with average (%)

Australia
Brazil
Canada
Chile
Colombia
Finland
Hungary
Iceland
N. Zealand
Philippines
Poland
South Africa
Thailand
Korea
Peru
Latin America
World
Advanced Ec.
Europe

1990 - 1999
2000 - 2006

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Concluding Remarks

- Copper will still be the main economic activity in Chile.
- There is no evidence that Chile has suffered from the natural resources curse with copper sector.
- The impact of copper on the business cycle is much more limited. In part due to the characteristics of the sector (the expansion has occurred mainly in private–foreign mining) and the effect of macroeconomic policies.
Concluding Remarks

- Macroeconomic policies have stabilized the Chilean Economy
  - Excessive contractions or expansions have been prevented.
  - Lower volatility of GDP around the world.
- In the current expansion, although macroeconomic policies have played a stabilizing role, there are other factors that should help to explain the moderate growth performance of the Chilean economy.
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